Public Notice



Applicant:City of Akron

Date:

Published: April 2, 2004

Expires: May 1, 2004

U.S. Army Corps of Engineers

In Reply Refer To:

Buffalo District CELRB-TD-R RE: 2003-00969(0) Section: OH 404

Application for Permit under Authority of Section 404 of the Clean Water Act (33 U.S.C. 1344).

The City of Akron, 166 South High Street, Akron, Ohio 44308-1652 has applied for Department of the Army authorization to create a new stabilized channel for an unnamed tributary to Sand Run. The project is located within the Fairlawn Country Club, near Wheaton Road, in the City of Akron, Summit County, Ohio.

Department of the Army authorization is required to place fill material in approximately 2,000 linear feet of an unnamed tributary to Sand Run.

The applicant is proposing to create a new stabilized channel for the unnamed tributary to Sand Run, including the addition of cross vanes to provide bed stabilization and J-hook vanes.

The stated purpose of the project is the restoration of the unnamed tributary to Sand Run, including enhancement and restoration of the riparian corridor and flood plain.

Location and details of the above described work are shown on the attached maps and drawings.

Questions pertaining to the work described in this notice should be directed to Claudia R. Steele, who can be contacted by calling (716) 879-4294, or by e-mail at: Claudia.R.Steele@usace.army.mil

The following authorization(s) may be required for this project:

Water Quality Certification (or waiver thereof) from the Ohio Environmental Protection Agency.

Based on preliminary findings, there do not appear to be any properties listed in, or eligible for listing in, the National Register of Historic Places within the permit area as shown on Sheet 1 of 5. This notice constitutes initiation of consultation with the Ohio Historic Preservation Office (SHPO) per Section 106 of the National Historic Preservation Act. All currently available historic resource information pertaining to this proposed project if any has been provided to the SHPO. Additional information concerning historic properties should be submitted to the Corps before the end of the comment period of this notice. The Corps will forward that information to the SHPO for their review.

In addition, available evidence indicates that the proposed work will not affect a species proposed or designated by the U.S. Department of the Interior as threatened or endangered, nor will it affect the critical habitat of any such species.

This notice is promulgated in accordance with Title 33, Code of Federal Regulations, parts 320-330. Any interested party desiring to comment on the work described herein may do so by submitting their comments, in writing, so that they are received no later than 4:30 pm on the expiration date of this notice.

Comments should be sent to the U. S. Army Corps of Engineers, 1776 Niagara Street, Buffalo, New York 14207, and should be marked to the attention of Claudia R. Steele, or by e-mail at: Claudia.R.Steele@usace.army.mil. A lack of response will be interpreted as meaning that there is no objection to the work as proposed.

Comments submitted in response to this notice will be fully considered during the public interest review for this permit application. All written comments will be made a part of the administrative record which is available to the public under the Freedom of Information Act. The Administrative Record, or portions thereof may also be posted on a Corps of Engineers internet web site. Due to resource limitations, this office will normally not acknowledge the receipt of comments or respond to individual letters of comment.

Any individual may request a public hearing by submitting their written request, stating the specific reasons for holding a hearing, in the same manner and time period as other comments.

Public hearings for the purposes of the Corps permit program will be held when the District Commander determines he can obtain additional information, not available in written comments, that will aid him in the decision making process for this application. A Corps hearing is not a source of information for the general public, nor a forum for the resolution of issues or conflicting points of view (witnesses are not sworn and cross examination is prohibited). Hearings will not be held to obtain information on issues unrelated to the work requiring a permit, such as property ownership, neighbor disputes, or the behavior or actions of the public or applicant on upland property not regulated by the Department of the Army. Information obtained from a public hearing is given no greater weight than that obtained from written comments. Therefore, you should not fail to make timely written comments because a hearing might be held.

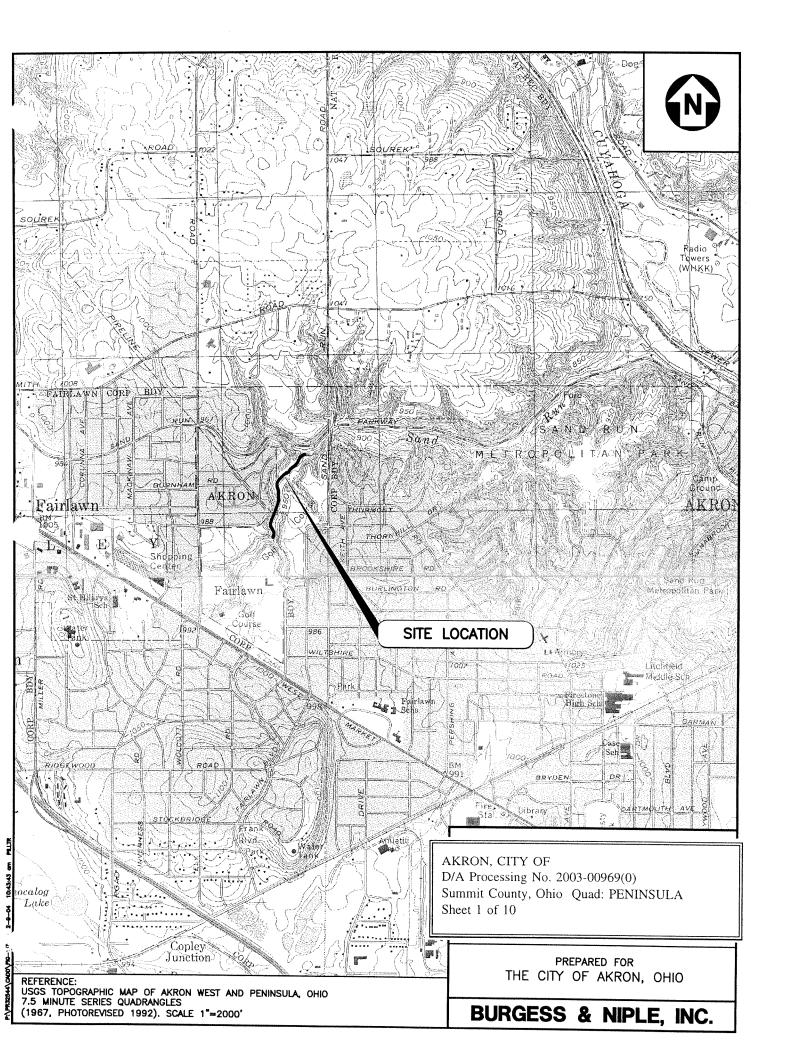
The decision to approve or deny this permit request will be based on an evaluation of the probable impact, including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefits which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof; among these are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, flood plain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and in general, the needs and welfare of the people.

The Corps of Engineers is soliciting comments from the public; Federal, state and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the

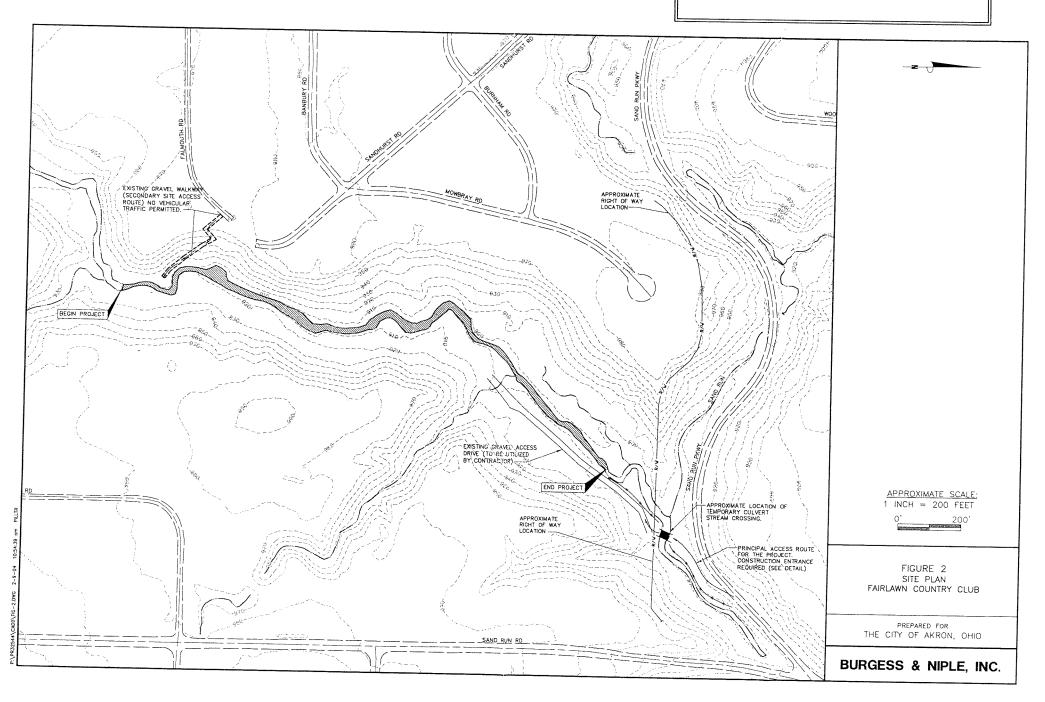
preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

Philip D. Frapwell Acting Chief, Regulatory Branch

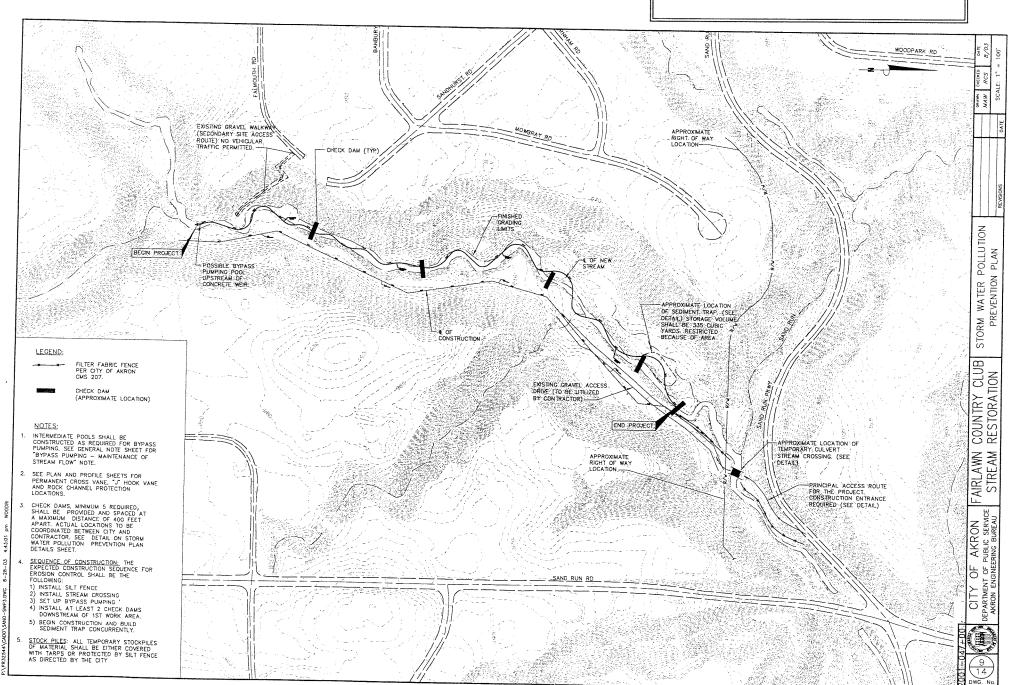
NOTICE TO POSTMASTER: It is requested that this notice be posted continuously and conspicuously for 30 days from the date of issuance.



AKRON, CITY OF D/A Processing No. 2003-00969(0) Summit County, Ohio Quad: PENINSULA Sheet 2 of 10



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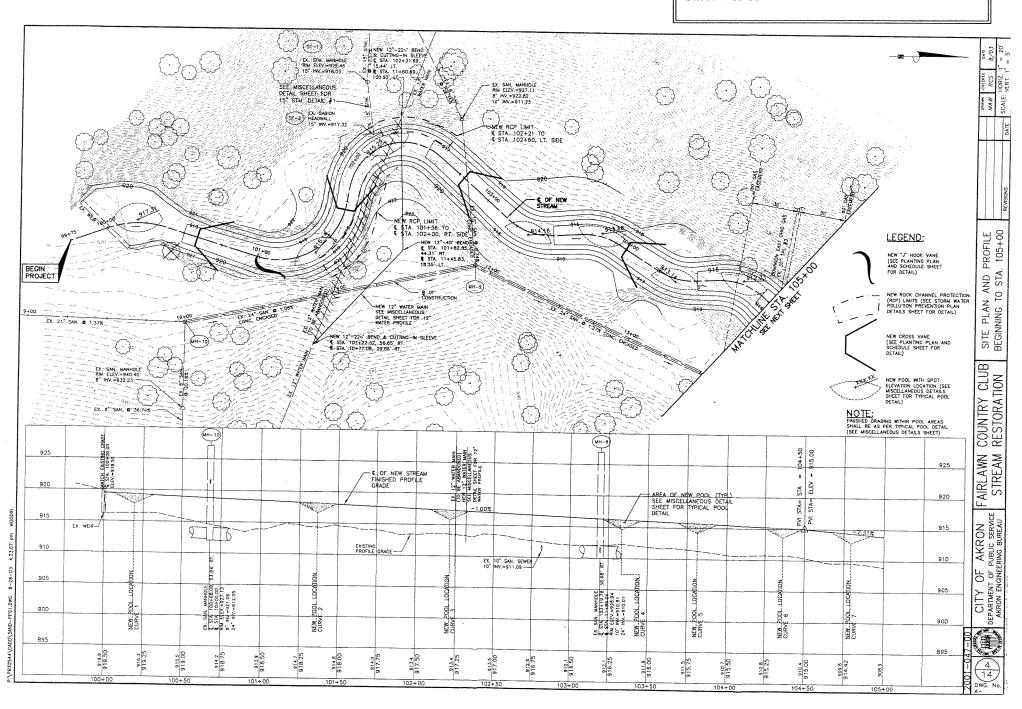


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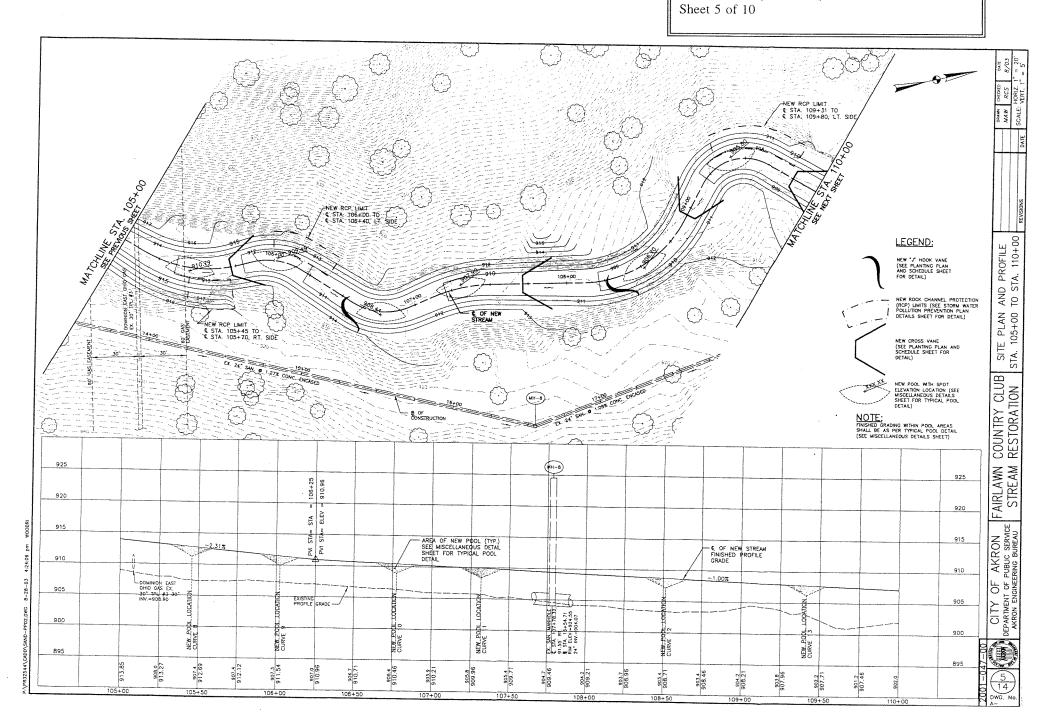
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Summit County, Ohio Quad: PENINSULA

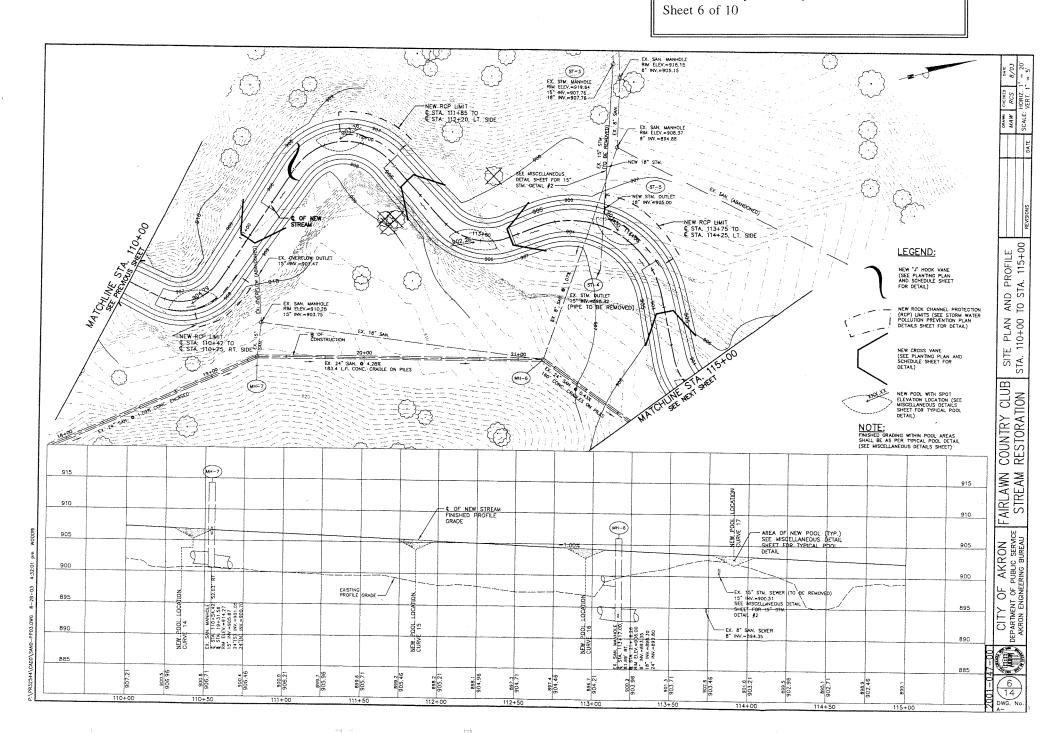
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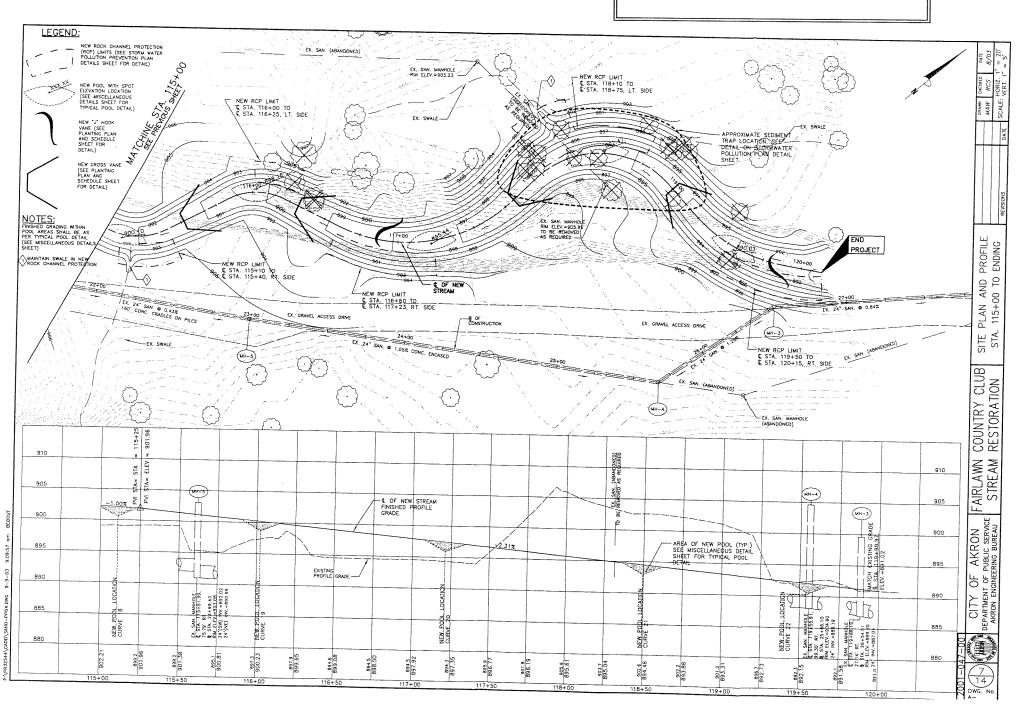


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Summit County, Ohio Quad: PENINSULA

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Summit County, Ohio Quad: PENINSULA Sheet 8 of 10 STA. 108+50 STA. 119+50 NEW POOL AREA IS NOT SHOWN.
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AREAS SHALL BE AS PER TYPICAL
POOL DEFAIL (SEE MISSELLANGOUSDETAILS SHEET). NEW POOL AREA IS NOT SHOWN, THISHED GRADING WITHIN POOL AREAS SHALL BE AS PER TYPICAL POOL DETAIL (SEE MISCELLANEOUS DETAILS SHEET). STA. 105+75 STA. 116+75 3.42% STA. 103+00 STA. 114+00 NEW POOL AREA IS NOT SHOWN.
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FINISHED GRADING WITHIN POOL AREAS
SHALL BE AS PER TYPICAL POOL DETAIL
(SEE WISCELLANEOUS DETAILS SHEET)

AKRON, CITY OF D/A Processing No. 2003-00969(0)

> SECTIONS TO STA. 119+50 CROSS 100+25 STA. COUNTRY CLUB FAIRLAWN (CITY OF AKRON
> DEPARTMENT OF PUBLIC SERVICE
> AKRON ENGINEERING BUREAU

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TEMPORARY CULVERT STREAM CROSSING

- 1. STECAN DISTURBANCE DISTURBANCE TO THE STREAM SHALL BE KEPT TO A MINIMUM.
 STREAMBANN VEGETATION SHALL BE PRESERVED TO THE MAXIMUM EXTENT PRACTICAL AND THE STREAM
 CROSSING SHALL BE AS NARROW AS PRACTICAL.
- CLEARING SHALL BE DONE BY CUTTING NOT GRUBBING. THE ROOTS AND STUMPS SHALL BE LEFT IN PLACE TO HELP STABILIZE THE BANKS AND ACCELERATE REVEGETATION.
- TO MINIMIZE INTERFERENCE WITH FISH SPARWING AND MIGRATION, CROSSING CONSTRUCTION SHOULD BE AVOIDED WHERE PRACTICAL FROM MARCH 15 THROUGH JUNE 15.
- 4. WATER SHALL NOT BE ALLOWED TO FLOW ALONG THE ROAD DIRECTLY TO THE STREAM. DIMERSIONS AND SWALES SHALL DIRECT RUNGET AWAY FROM THE ACCESS ROAD TO A SEDIMENT—CONTROL PRACTICE.
- PLACEMENT CHURSTS SHALL BE PLACED ON THE EXISTING STREAMBED TO AVOID A DROP OR WATERFALL AT THE COMMISTRAL BIOL OF THE PIET, WHICH WOULD BE A BARRER TO FIRST MIGRATION. CROSSINGS SHALL BE MADE IN SHALLOW AREAS PARTER THAN DEEP POLIS WHERE POSSIBLE.
- CULVERT SIZE -- CULVERT DIAMETER SHALL BE AT LEAST THREE THES THE DEPTH OF NORMAL STREAM FLOW AT THE POINT OF THE STREAM CROSSING. IF THE CROSSING MUST BE PLACED IN DEEP, SLOW-MOMING POOLS, THE CLUVERT DIAMETER MAY BE REDUCED TO THICE THE DEPTH OF NORMAL STREAM FLOW. THE MINIMUM SIZE CULVERT THAT MAY BE USED IS 18-MING.
- NUMBER OF CULVERTS THERE SHALL BE SUFFICIENT NUMBER OF CULVERTS TO COMPLETELY CROSS THE STREAM CHANNEL FROM STREAMBANK TO STREAMBANK WITH NO MORE THAN A 12-INCH SPACE BETWEEN EACH ONE.
- 8. FILI AND SURFACE MATERIAL ALL MATERIAL PLACED IN THE STREAM CHANNEL AROUND THE CULVENTS AND ON THE SURFACE OF THE CROSSING SHALL BE STONE, ROCK OR AGGREGATE. DOOD HOLD THE STREAM CHANGE HOLD AND ACCEPTABLE SEZE. TO PREVENT MASHOUTS, LARGER STONE AND ROCK AND ROCK OF THE MASHOUTS, LARGER STONE AND ROCK ON THE MASHOUTS AND THE MASHOUTS AND STREAM CHANNEL OF THE MASHOUTS AND THE MASHOUTS AND
- REMOVAL --- ACGREGATE STONE AND ROCK USED FOR THIS STRUCTURE DOES NOT NEED TO BE REMOVED. CARE SHOULD BE TAKEN SO THAT ANY AGGREGATE LEFT DOES NOT CRCATE AN IMPONIBLENT OR IMPERE SHAT PASSAGE, ALL PIPES, CULVERTS, GABIONS OR STRUCTURES MUST BE REMOVED. REMOVAL SHALL BE PER CITY REQUI
- 10. RESTORATION STREAMBANKS SHALL BE STABILIZED, PLANTING SHALL BE PER THE CITIES PLANTING REQUIREMENTS ON SHEET 12 FOR CHANNEL PROTECTION, INCLUDE WOOD'T VEGETATION WHERE PRACTICAL.

SEDIMENT TRAPS

- 1. SEDIMENT TRAPS SHALL BE CONSTRUCTED AND OPERATIONAL BEFORE UPSLOPE LAND DISTURBANCE BEGINS.
- THE AREA UNDER THE EMBANKMENT SHALL BE CLEARED, GRUBBED, AND STRIPPED OF ANY VEGETATION AND ROOT MAT. THE POOR, AREA SHALL BE CLEARED AS NEEDED TO FACILITATE SEDIMENT LOCAMOUT.
- 3. FILL MATERIAL USED FOR THE EMBANKMENT SHALL BE FREE OF ROOTS OR OTHER WOODY VEGETATION AS WELL AS OVERSIZED STONES, ROOKS, DEGANIC MATERIAL OR OTHER OBJECTIONABLE MATERIAL. THE EMBANKMENT SHALL BE COMPACTED BE TRAVESSING WITH COUPLEMENT WHILE IT IS BEING CONSTRUCTED. MAXIMUM HEIGHT OF THE EMBANKMENT SHALL BE 5 FT. AS MEASURED FROM THE SURROUMNIC GROUND.
- 4. CUT-AND-FILL SLOPES SHALL BE 2:1 OF FLATTER.
- 5. DIKES DIRECTING WATER TO THE TRAP SHALL BE HIGHER THAN THE HEIGHT OF THE EMBANKMENT.
- 6. TEMPORARY SEEDING SHALL BE ESTABLISHED ON ALL NONSUBMERGED AREAS OF THE SEDIMENT TRAP.
- 7. THE STORAGE VOLUME BELOW THE CREST OF THE OUTLET SHALL BE ACHIEVED TO THE DIMENSIONS SHOWN IN THE PLANS.

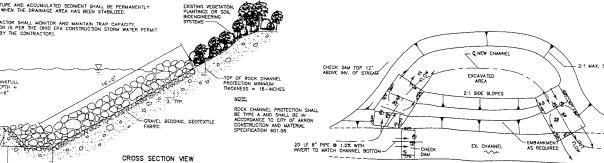
ROCK CHANNEL PROTECTION DETAIL

- 8. THE OUTLET SPILLWAY SHALL BE CONSTRUCTED TO THE DIMENSIONS SHOWN IN THE PLANS.
- GEOTEXTILE SHALL BE PLACED AS SHOWN. SECTIONS OF GEOTEXTILE SHALL OVERLAP AT LEAST 2 FT.
- ROCK USED IN THE OUTLET SPILLWAY SHALL BE PLACED 1 FT. THICK ON THE GEOTEXTILE. THE ROCK SHALL BE BETWEEN TYPE C AND TYPE D ROCK WHERE D IS ABOUT 8 IN.
- SEDIMENT SHALL BE REMOVED AND THE SEDIMENT TRAP RESTORED TO ITS SEDIMENT SHALL BE REMOVED AND THE SEDIMENT TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS FILLED ONE—HALF THE POND'S ORIGINAL DEPTH. REMOVED SEDIMENT SHALL BE SPREAD IN A SUITABLE AREA AND STABILIZED SO IT WILL NOT ERODE.
- THE STRUCTURE AND ACCUMULATED SEDIMENT SHALL BE PERMANENTLY STABILIZED WHEN THE DRAINAGE AREA HAS BEEN STABILIZED.

STREAMBED

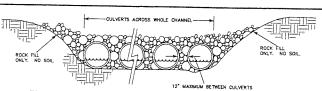
BOTTOM OF ROCK CHANNEL PROTECTION MINIMUM THICKNESS =/

THE CONTRACTOR SHALL MONITOR AND MAINTAIN TRAP CAPACITY, STABILIZATION IS PER THE OHIO EPA CONSTRUCTION STORM WATER PERMIT (OBTAINED BY THE CONTRACTOR).

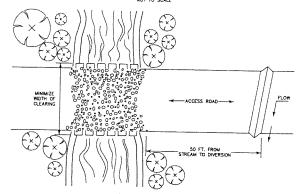


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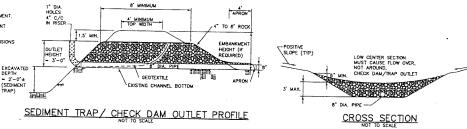
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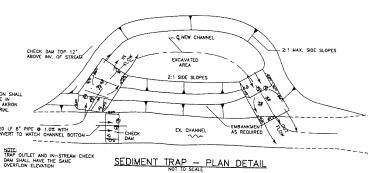
TEMPORARY CULVERT STREAM CROSSING SECTION



JEMPORARY CULVERT STREAM CROSSING PLAN VIEW



SEDIMENT TRAP / CHECK DAM OUTLET PROFILE



SEDIMENT TRAP - PLAN DETAIL

INGRESS/EGRESS PLAN VIEW ROAD OR OTHER EXISTING PAVED SURFACE 18" OR SUFFICIEN CULVERT AS NEEDED PROFILE

- STONE SIZE -- TWO INCH STONE SHALL BE USED, RECYCLED CONCRETE WILL NOT BE PERMITTED.
- LENGTH —— THE CONSTRUCTION ENTRANCE SHALL BE AS LONG AS REQUIRED TO STABILIZE HIGH TRAFFIC AREAS BUT NOT LESS THAN 50 FT.
- 3. THICKNESS -- THE STONE LAYER SHALL BE AT LEAST 6 IN. THICK
- 4. WOTH -- THE ENTRANCE SHALL BE AT LEAST 10 FT, WIDE, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
- 5. BEDDING -- A GEOTEXTILE SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING STONE. IT SHALL HAVE A GRAB TENSILE STRENGTH OF AT LEAST 200 LB. AND MULLEN BURST STRENGTH OF AT LEAST 190 LB.
- 6. CULVERT -- A PIPE OF CULVERT SHALL BE CONSTRUCTED UNDER THE ENTRANCE IF NEEDED TO PREVENT SURFACE WATER FLOWING ACROSS THE ENTRANCE FROM BEING DIRECTED OUT ONTO PAVED SURFACES.
- WATER BAR A WATER BAR SHALL BE CONSTRUCTED AS PART OF THE CONSTRUCTION ENTRANCE IF NEEDED TO PREVENT SURFACE RUNOFF FROM FLOWING THE LENGTH OF THE CONSTRUCTION ENTRANCE AND OUT ONTO PAYED SURFACES.
- MAINTENANCE TOP DRESSING OF ADDITIONAL STONE SHALL BE APPLIED AS CONDITIONS DEMAND, MUD SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADS, OR ANY SEDIMENT CONTROLS, SHALL BE REMOVED MAPPLIATELY, REMOVAL SHALL BE ACCOMPLISHED BY SCRAPING OR CONTRIBUTE.
- 9. CONSTRUCTION ENTRANCES SHALL NOT BE RELIED UPON TO REMOVE MUD FROM VEHICLES AND PREVENT OFF-SITE TRACKING.

CONSTRUCTION ENTRANCE DETAIL AND NOTES

GENERAL EROSION CONTROL NOTES:

- SEDIMENT PONDS/TRAPS AND PERIMETER CONTROLS SHALL BE IMPLEMENTED AS A FIRST STEP OF GRADING AND WITHIN 7 DAYS FROM THE START OF GRUBBING AND SHALL CONTINUE TO FUNCTION UNTIL UPLAND AREAS ARE STABILIZED.
- DISTURBED AREAS WHICH WILL REMAIN UNWORKED FOR A PERIOD OF 21 DAYS OR MORE SHALL BE STABILIZED WITH SEEDING AND MULCHING OR OTHER APPROPRIATE MEANS WITHIN 7 DAYS.
- . EROSION CONTROL BLANKETS WITH MATTING WILL BE USED ON DITCHES GREATER THAN 1.5% AND ALL OTHER SLOPES GREATER THAN 6% GRADE
- BUILDER IS RESPONSIBLE FOR EROSION CONTROL ON INDIMIDUAL LOT. BUILDER MUST FILE INDIVIDUAL LOT NOTICE OF INTENT (NO.) WITH OHIO EPA.
- 5. NO SOLID OR LIQUID WASTE SHALL BE DISCHARGED INTO STORM WATER RUNOFF.
- OFF-SITE VEHICLE TRACKING SEDIMENT SHALL BE MINIMIZED. CONSTRUCTION WEHICLES ARE LIMITED TO THE CONSTRUCTION ACCESS ROAD(S) NOTED ON THE PLAN.
- ALL EROSION AND SEDIMENT CONTROL PRACTICES MUST MEET THE STANDARDS AND SPECIFICATIONS OF THE OHIO RAINWATER AND LAND DEVELOPMENT HANDBOOK (1996).
- B. OTHER EROSION AND SEDIMENT CONTROL ITEMS MAY BE NECESSARY DUE TO ENVIRONMENTAL CONDITIONS.
- 9. REQUIAR INSPECTION AND MAINTENANCE WILL BE PROVIDED FOR ALL ERISSON AND SEDMENT CONTROL PRACTICES. PERMANENT RECORDS OF CONSTRUCTION SERVICE OF KEPT THROUGHOUT THE OF OMCE CONSTRUCTION SERVICE OF THE PROPERTY OF THE OFFICE OFFICE
- 10. WMTERIZATION ANY DISTURBED AREA THAT IS NOT GOING TO BE WORKED FOR 21 DAYS OR WORE MUST BE SEEDED AND MULCHED BY NOVEMBER 1 OR MUST HAVE A DORMANT SEEDING OR MULCH COVER APPLIED BETWEEN NOVEMBER 1 AND MARCH 1.

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POLLUTION DETAILS PLAN WATER PREVENTION STORM NB

3 5 8 COUNTRY RESTORAT AIRLAWN STREAM

AKRON
PUBLIC SERVICE
ERING BUREAU CITY OF DEPARTMENT OF AKRON ENGINEE



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PLANTING NOTES

EROSION CONTROL FABRIC

1. EROSION CONTROL FABRIC SHALL BE CONSTRUCTED OF 100 PERCENT BIODEGRADABLE MATERIALS. FABRIC SHALL BE SEWN COCONUT FIBER OR APPROVED EQUAL CAPABLE OF HANDLING HIGH VELOCITY FLOWS.

- 2. UNLESS OTHERWISE SPECIFIED BY THE MANUFACTURER, EROSION CONTROL FABRIC SHALL BE INSTALLED FOLLOWING COMPLETION OF SOIL PREPARATION AND TEMPORARY SEEDING ACTIVITIES.
- 3. EROSION CONTROL FABRIC SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS, OR, IF NO SPECIFICATIONS ARE PROVIDED, THE FOLLOWING GENERAL PROCEDURES SHALL BE USED:
- A. EROSION CONTROL FABRIC SHALL BE INSTALLED VERTICALLY (E. ROLLED DOWN FROM THE TOP OF SLOPE, NOT INSTALLED HORIZONTALLY ACROSS THE SLOPE FACE). ACAH MOTH OF FABRIC SHALL BE SECURED AT THE TOP OF SLOPE BY ANCHORING AND BURNING THE LEADING EDGE OF THE FABRIC IN MINIMUM OF 3 FEET FROM THE PER PORT OF STATE AND A WINNIMUM OF 3 FEET FROM THE TOP EDGE OF THE STATE AND A WINNIMUM OF STEET FROM THE DEP EDGE OF THE STATE OF THE STATE OF THE TRENCH SHALL BE FOULD AN OWNCHORD IN THE BOTTOM OF THE TRENCH SHALL BE FOULD AND ANCHORDED IN THE BOTTOM OF THE TRENCH BACKFILLED AND TAMBERS OF STATELS. THE TRENCH SHALL BE BACKFILLED AND TAMBERS SHALL ALSO BE ANCHORDED IN THENDRESS AT LEAST EVERY 100 FEET ALONG THE CHANNEL BED.
- B. TO JOIN TWO FABRIC LENGTHS TOOTTHER DOWN THE FACE OF THE SLOPE.
 THE TAIL END OF THE UPSLOPE LENGTH SHALL BE LAPPED AND ANG-ORDED
 OVER THE LEADING EDGE OF THE DOWNSLOPE LENGTH ALLOWING A MINIMUM
 OF 6 INCHES OVERLAP. FABRIC LAYERS SHALL BE PINNED. STAKEDR
 STAPLED TOCTHER AT OVERLAPS. THE SAME OVERLAP PROCEDURE
 DESCRIBED ABOVE SHALL ALSO BE USED TO JOIN FABRIC WOTHS TOGETHER.
- 4. AREAS SIGNIFICANTLY DISTURBED DURING FABRIC INSTALLATION SUCH AS ANCHOR TRENCHES SHALL BE RESEEDED FOLLOWING COMPLETION OF INSTALLATION ACTIVITIES.

ZONE 1 LIVE STAKES
1. LIVE STAKES SHALL BE OBTAINED FROM DORMANT CUTTINGS OF AT LEAST TWO OF THE FOLLOWING SPECIES USTED ON THE PLANTING CROSS SECTIONS DETAIL FROM ZONE 1.

- 2. CUTTINGS SHALL BE OBTAINED FROM COMMERCIAL OR STATE—OWNED SOURCES WITH AN ESTABLISHED HISTORY OF PROVIDING HEALTHY PLANT MATERIAL.
- 3. CUTTINGS SHALL BE FRESH AND OBTAINED WHEN PARENT PLANTS ARE DORMANT (NOVEMBER 1ST TO APRL 1ST). SIDE BRANCHES SHALL BE CLEANLY REMOVED AND BARK NITACT. CUTTINGS SHALL BE STORED IN WATER, OUT OF DIRECT SUNUGHT, AND KEPT AT COOL TEMPERATURES UNTIL DELIVERY TO THE SITE.
- 4. LIVE STAKES SHALL RANGE FROM 0.5 TO 1.5 INCHES IN DIAMETER AND BE CUT TO LENGTHS OF 2 TO 3 FEET. THE BASE END OF EACH STAKE SHALL BE CUT AT A 45 DEGREE ANGLE AND THE TOP END SHALL BE CUT SQUARE.
- S. JUK. STAKES MAY BE DELIVERED READY FOR INSTALLATION OR CUT AT THE SITE FROM LARGER CUTTINES, MOREVER, INSTALLATION OF LIVE STAKES SHALL BE COORDINATED SUICH THAT STAKES AND ATTEMPT AN
- UVE STAKES SHALL BE INSTALLED FOLLOWING COMPLETION OF GRADING/BANK SHAPING ACTIVITIES AND PLACEMENT OF EROSION CONTROL FABRIC.
- 7. LIVE STAKES SHALL BE INSTALLED THROUGH THE EROSON CONTROL FABRIC AT INTERVALS 2 TO 3 FEET APART USING TRIANGULAR SPACING, BUDS SHALL BE ORBEITED UPWARD. STAKES BAY BE TAMPED DIRECTLY INTO THE UNDERLYING SOIL WHERE SOIL CONDITIONS PERMIT, OR IN PILOT

HOLES FORMED BY AN IRON BAR OR DIBBLE. PILOT HOLES SHALL BE SMALLER IN DIAMETER THAN LIVE STAKES. EACH STAKE SHALL BE HEELED AND WATERED IN IF PILOT HOLES ARE USED.

8. FOUR FIFTHS OF THE LENGTH OF EACH STAKE SHOULD BE INSTALLED BELOW GROUND WITH THE REMAINING ONE FIFTH (APPROXIMATELY 6 MOVIES) PROTRICIDING ABOVE GROUND, SOL. SHALL BE PACKED IN FIRMLY AROUND EACH STAKE TO ACHIEVE GOOD CONTACT FOR ROOTING. A WOODEN MAUL EACH STAKE TO ACHIEVE GOOD CONTACT FOR ROOTING. A WOODEN MAUL EACH STAKE TO THE STAKE STAKES AND REJINANCE IN FOLLOWING AND REINSTALLED IF SUFFICIENT LENGTH REJAMS. IF NOT, THEY SHALL BE SUSCARDED.

9. LIVE STAKES SHALL BE PLACED AT THE RATE OF FOUR PER SQUARE YARD AS SHOWN FOR ZONE 1 IN THE PLANTING CROSS SECTION. ZONE 2 BARE ROOT SEEDLINGS

1. BARE ROOT SEEDUNGS SHALL BE OBTAINED FROM A REPUTABLE NURSERY SOURCE

2. BARE ROOT SEEDLINGS SHALL BE GEL-DIPPED PRIOR TO PLANTING IN A HORTICULTURAL WATER ABSORBING GEL WIXTURE. SEEDLINGS SHALL BE HARDLED WITH CARE AT ALL HIMES DURING TRANSPORT, DELIVERY, AND PLANTING TO PREVENT DRYING OUT OR INJURY TO ROOTS, BRANCHES, OR STEMS.

- 3. BARE ROOT SEEDUNGS SHALL BE PLANTED IN SPRING (APRIL 15TH TO JUNE 15TH). OR FALL (SEPTEMBER 15T TO NOVEMBER 15T). SUMMER PLANTINGS MAY BE APPROVED IF SEEDLINGS WILL BE IRRIGATED OR WATERED.
- 4. PLANTNO SHALL BE SOMEDULES SO THAT SEEDLINGS ARE PLANTED WITHIN 24 HOURS OF DELIVERY THOU THE MISSERY. WALTHER OR DIMER HAVE SEEDLINGS FROM THE MISSERY WALTHER OR DIMER HAVE SEEDLINGS FROM THE MISSERY WAS SHALL BE MUC
- S. SEEDINGS SHALL BE FLAMED IN CLUSTERS OF FOUR PLANTS FROM A SONCE SPECIES CLUSTERS HAVE SPACED A MANUAU OF TEN FEE APART USING THAMBOLAR SPACED SE SPACED A MANUAU OF TEN FEE APART USING THAMBOLAR SPACED SPACES CLUSTERS SHALL BE ALTERNATED ON A RANDOW BASS OF TO AS TO ASSENCE AS A THAMBOLAR SPACE AS A MANUAL SPACE AS
- 5. EACH SEEDLING SHALL BE INSPECTED PRIOR TO PLANTING FOR SIGNS OF INJURY, MINOR INJURIES TO ROOTS OR BRANCHES MAY BE TRIMED CLEANLY PRIOR TO PLANTING, BUT SEEDLINGS TOO BADLY RAUFED TO BE WABLE SHALL BE DISCARDED AND REPLACED WITH HEALTHY STOCK.
- 7. PLANTING HOLES MAY BE GENERATED USING A DIBBLE BAR OR SHOVEL PLANTING HOLES SHALL BE OF SUFFICIENT DEPTH AND DIAMETER TO ACCUMADONE SEEDLING ROOTS WITHOUT TIMESTING OR BENDING. UPWARD BENDING OF ROOTS THIS IN A "J" SHAPE SHALL BE STUDIOUSLY ANDIED. PLANTING DEPTH SHALL BE STRICKENT TO ALLOW THE SEEDLING TO BE PLANTING DEPTH SHALL BE SUFFICIENT TO ALLOW THE SEEDLING TO BE PLANTIED AT THE SAME DEPTH IT ORIGINALLY GREW WHEN THE HOLE IS SECRETLED AND HELLED IN.

B. FOLLOWING CORRECT PLACEMENT OF EACH SEEDLING IN THE PLANTING HOLE, THE HOLE SHALL BE BACKFILLED AND HEELED IN SO AS TO ACHIEVE UNIFORM GOOD SOIL CONTACT THROUGHOUT THE HOLE.

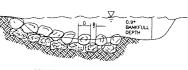
9. EACH CLUSTER OF FOUR SEEDLINGS SHALL BE STAKED OR OTHERWISE MARKED IN A REASONABLY PERMANENT, READILY IDENTIFIABLE MANNER.

10. PLANTINGS SHALL BE INSPECTED REGULARLY AND MAINTAINED IN WABLE CONDITION UNTIL FINAL INSPECTION AND ACCEPTANCE OF THE PROJECT. DEAD OR DAMAGES SEGULINGS SHALL BE REWOVED AND REPLACED PROMPTLY WITH HEALTHY STOCK DURING THIS PERIOD.

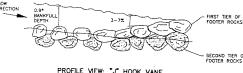
11. THE BARE ROOT SEEDUNGS SHALL BE PLACED AT THE RATE OF 1,000 PER ACRE IN ZONE 2.

IEMPORARY SEEDING:

1. ALL DISTURBED AREAS OF THE PROJECT SHALL BE TEMPORARY SEEDED PER ARRON CUS ITEM 207 - TEMPORARY SEEDING AND MULCHING, AFTER PLANTING AND EROSION CONTROL FABRIC WORK.



CROSS-SECTION VIEW: "J" HOOK VANE



PROFILE VIEW: "J" HOOK VANE

Rock For J-Hook Vanes Sholl Be Stone Consisting Of Sizes Such That At Least 85-Percent Of Total Material 89 Weight Be Larger Than An 24-Inch Square Opening. The Material Smaller Than An 24-Inch Square Opening Shall Consett Predominantly Of Rock Spolls And Rock Fines And Sholl 8e Free Of Soil. Limestone And Concre Shall Not Permitted.

J-Hooks Sholl Be Poid For Under CMS Item 501 - Rock Channel Protection, Type A, As Per Plan,



COMMON NAME
SILKY DOGWOOD
RED—OSIER DOGWOOD
PUSSY WILLOW
HEART-LEAVED
WILLOW
Solix kiriocephole
WILLOW
Solix kiriocephole MILLOW SHINING WILLOW STREAMCO WILLOW BANKERS WILLOW

ZONE 2

RED MAPLE SILVER MAPLE HACKBERRY SILKY DOGWOOD GREEN ASH BLACK CHERRY CRABAPPLE PIN OAK PIN OAK ELDERBERRY BLACKHAW

1/3

FLOW DIRECTION

PLAN MEW: "J" HOOK VANE

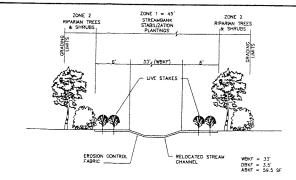
"J" HOOK VANE DETAIL

NO GAPS

- 20-30

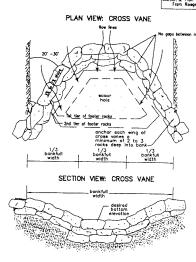
- EMBEDDED WIDTH * MAXIMUM ROCK SIZE (TYP.)

SCIENTIFIC NAME Acer negundo Acer rubrum Caltis occidentalis
Cornus amomum
Cornus racemosa
Froxinus pennsylvi
Prunus serotino
Pyrus coronario
Ouercus polustris
Sambucus conade
Viburnum prunifoli
Viburnum prongotium
Viburnum recognitum



PLANTING CROSS SECTION NOT TO SCALE

CROSS VANE DETAIL NOT TO SCALE Section & Pion Views Adapted From Rosgen (1999)



PROFILE: CROSS VANE ARM

PROFILE VIEW OF CENTER OF CROSS VANE Bankfull Depth 15/15/2015 WHITE COLUMN NOTE:

Rock For Cross Yones Sholl Be Stone Consisting Of Sizes Such That At Least 85-Percent Of Total Material By Weight Be Larger Than An 24-Inch Square Opening. The Material Smaller Than An 24-Inch Square Opening Shall Consist Predominantly Of Rock Spalls And Rock Fines And Shall Be Free Of Soil. Limestone And Concrete Shall Not Be Permitted.

Cross Vanes Shall Be Paid For Under CMS Item 601 --Rock Channel Protection, Type A, As Per Plan.

FAIRLAWN STREAM AKRON
PUBLIC SERVCE
ERING BUREAU 9 5 CITY C DEPARTMENT AKRON ENGI

AS

MAW

PLANTING PLA AND SCHEDULE

COUNTRY CLUB